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*[Continued on next page]*

**(57) Abstract:** A FIR filter includes an input pipeline IP with a sequence of input delay cells DI<sub>i</sub>, each for storing an input sample, and a plurality of N input tap points TP<sub>i</sub>. An output pipeline includes a sequence of output delay cells DO<sub>i</sub>, each for storing a sample, a plurality of N summing elements Si for adding at least two samples, and an output switching network OSN for accumulating output values from the summing elements. A sequence of N taps T<sub>i</sub> are used for coupling the input pipeline to the output pipeline. Each tap includes a respective multiplier Mi for multiplying a sample from an input tap point by a coefficient. At least N-1 of the taps include a switching element for directing a sample from an input tap point through the multiplier to a summing element. The switching elements are arranged to enable supply of a sample from any tap point TP<sub>j</sub> to a summing element Si, where j <= i.



CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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## INTERNATIONAL SEARCH REPORT

International Application No

IB2004/050339

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H03H17/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H03H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)  
EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages.	Relevant to claim No.
A	US 5 892 695 A (VAN DALFSEN AGE J ET AL) 6 April 1999 (1999-04-06) cited in the application column 4, line 8 - line 52; figure 3 -----	1-10

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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## INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5892695	A	06-04-1999	DE 69708841 D1	17-01-2002
			DE 69708841 T2	22-08-2002
			EP 0870364 A2	14-10-1998
			WO 9819396 A2	07-05-1998
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